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ABSTRACT

In the fall of 1969, Hiram College launched a new curriculum. All the traditional discipline-oriented graduation requirements were eliminated in favor of several types of interdisciplinary programs and more student electives. The focus of the Hiram curriculum is on the freshman year. As a result of these changes, a task force was appointed to answer 4 questions: how are the new programs going to be staffed; how will they affect departmental offerings and major programs; how will they affect teaching loads; what extra costs will be accrued. (Author/CS)

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COURSE PROJECTIONS AND STAFFING NEEDS FOR THE NEW HIRAM COLLEGE CURRICULUM[1]

George A. Morgan

Last winter as the new curriculum began to take shape, the Task Force asked some hard and serious questions. Similar questions were raised by other members of the faculty. The questions were:

1. How are the new programs going to be staffed?
2. How will they affect departmental offerings and major programs?
3. How will they affect teaching loads?
4. What extra costs will be accrued?

President Jagow and the Task Force asked if I would take major responsibility for gathering and analyzing the data necessary to provide the answers. Let me emphasize that this "cost and load analysis" was begun after a year of discussions and planning and, thus, followed the formation of most of the ideas which were later presented in the report of the Task Force. It was indeed necessary to see if we could afford the program, if it could be staffed, and how; but I believe it is fair to say that the financial and manpower realities were not allowed to take the lead.

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[1]This paper is based on an oral presentation to a Hiram College faculty and staff conference held September 18-19, 1968. The meetings were held to discuss the proposed new curriculum which was the result of eighteen months of study by a curriculum revision Task Force appointed by President Elmer Jagow and chaired by Dean Wendell Johnson. The proposal was passed by the faculty in October, 1968, for implementation in the fall of 1969. Appended to this paper is an overview of the curriculum which is probably necessary background for full understanding of the model.

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The data which were gathered were of four basic types:

1) First, we gathered information from 183 students about their preferences for electives if the graduation requirements were substantially reduced.[2]

2) Second, we pulled together information from the Dean's and Registrar's offices about enrollments, schedules, number of graduates in each major field, etc.

3) Third, this summer we asked all entering students to fill in a one page questionnaire for their advisers which included a question asking them to name their current intended major, or if they were undecided about a major, to list the subject(s) in which they were most interested.

4) Fourth, also this summer, we asked the chairman of each department to make up a tentative list of departmental requirements for students who would concentrate or major in their field. We were especially interested in the seven or eight courses outside the department that they might require as correlatives and in how they phrased their language requirement. (See page 4 and appended Overview for more about Area of Concentration.)

During the latter part of the summer, this information was analyzed and developed into a model intended to provide the basis for decisions about staffing and loads. Several preliminary tables help to describe the new curriculum and explain the model.

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[2]This data was collected in February, 1968, during the 11:30 classes of members of the curriculum Task Force. The sample, while of course not random, was quite representative of Hiram students with respect to major and year in college.

Table I is a sample of the class schedule for freshmen students under the new curriculum.

TABLE I. SAMPLE CLASS SCHEDULE

September	Fall Term	Winter Term	Spring Term
Institute	Colloquium	Colloquium	Traditional
	20th Century Course	20th Century	20th Century
	Traditional Course	Traditional Course	Traditional

Note that during the freshman year the student will take the "Institute," two "Colloquiums," three terms of the "Twentieth Century and Its Roots" course, and four traditional courses as electives. (Refer to the appended Overview for descriptions of the new courses.) The four traditional courses undoubtedly will be used to explore subjects of interest to the student, especially those related to his anticipated area of concentration (major).

During the three upperclass years the student will take at least three "Interdisciplinary Courses" to broaden and integrate his knowledge in the three major divisions of the College. The remaining twenty-four courses taken in the last three years will be in the student's Area of Concentration or electives.

Table II indicates the number of courses of each type that a typical student might take in his four years at Hiram.

TABLE II. DISTRIBUTION OF TYPES OF COURSES

Type of Course	Est. Ave. No. of Courses
General Requirements	
Colloquium	2
20th Century	3
Interdisciplinary	3

TABLE II. (continued)

Type of Course	Est. Ave. No. of Courses
Major Department	10
Correlative or supporting	7
Foreign Language	2
Elective	
In Major	2
Outside Major	7
	36

Table III gives an indication of the staffing requirements for the new curriculum. One should take note of the following aspects of Table III:

a) The "Institute" has not been included because, at least for the present, compensation for faculty participation will be in terms of supplemental income rather than course load reduction.

b) Staffing for the Freshman Colloquiums assumes 360 Freshmen and a 1 to 12 faculty-student ratio.

c) The Twentieth Century course will be staffed by a committee receiving a total over the year of nine courses in load reduction for teaching this course.

d) The staffing requirements for the Interdisciplinary Courses are hard to estimate because it is difficult to anticipate the number of students who will take them as electives. At a minimum we would appear to need twenty-five faculty to teach 750 upperclassmen who would be required to take Interdisciplinary courses. As planned this provides a student-faculty ratio of 30 to 1.

TABLE III. STAFFING REQUIREMENTS FOR THE NEW CURRICULUM

		Sections Needed	Faculty Needed	No. Students
Freshman Colloquiums	Fall	30	30	360
	Winter	30	30	360
	Spring	0	0	0
		60	60	720
Twentieth Century	Fall	1	3	360
	Winter	1	3	360
	Spring	1	3	360
		3	9	1080
Interdisciplinary Courses	Fall	3	7	210
	Winter	3	8	240
	Spring	4	10	300
		10	25	750
TOTAL		73	94	2550

e) The totals line indicates that ninety-four faculty courses (sections) are needed to staff the program next year. As will be seen below, this is approximately ten sections more than the model indicates can be obtained by deleting introductory courses. This implies the need for additional staff and/or deletion of additional courses.

Table IV is the model itself. The following statements include a few comments about each column in the Table.

a) On the left are listed each of Hiram's departments and the introductory courses which are now used by students to satisfy their general graduation requirements.

b) Next is the average number of students enrolled in each of these courses during the last three years. In some cases this

is also the average class size, e.g., Art 106 which had one section per year. Usually, as can be seen from the second to last column (i.e., "1968-9 Sections"), there have been several sections per year.

c) The following column shows the average number of majors per year for each department based on the last three graduating classes (1966-8).

d) The next two columns come from the responses of the entering (1968) class to questions about their intended major or their preferred subject if they did not have an intended major. For example, four new students intended to be Art majors and it was a first preference for eight who were undecided. An extrapolation was made from the 311 questionnaire respondents in 1968 to an anticipated 360 freshmen in 1969. This produced a prediction of the number of students in the 1969 class who would begin college with a preference for each of various departments, i.e., a prediction of what I have called "freshmen majors." By comparing the number of "freshmen majors" and the average number of "majors graduated," departmental differences in the attrition of majors can be noted. This differential attrition rate is important because it was used (in e and f, below) to help estimate the number of students who would take a given course.

e) The next column was an estimate, based on the reports submitted by department chairmen, about what courses outside the department they would require of their majors. For example, it was predicted that 80 students from other majors (e.g., English,

TABLE IV. THE STAFFING MODEL

	AVERAGE ENROLIMENT 1965-8	AVE.NO. MAJORS 1966-8	1968 FRESHMEN INTENDED MAJOR	1968 FRESHMEN MAJOR UNKNOWN 1st PREF.	CORRELATIVES TAKEN FOR OTHER MAJORS	MODEL FRESH. MAJORS	MODEL ELECTORS	MODEL TOTAL	SECTIONS NEEDED	SECTIONS 1968-9	SECTIONS SAVED
ART DEPT.		6	4	8							
Art 106	57				80	14	32	126	2	1	-1
BIOLOGY DEPT.		22	25	7							
Bio 103	264				61	30	47	138	2	5	+3
104	195				30	30	27	87	2	3	+1
CHEMISTRY DEPT.		12	6	7							
Chem 105	175				85	5	17	107	2	5	+3
112	23				20	15	0	35	1	1	0
123 & H	90				70	15	4	89	2	3	+1
ECONOMICS DEPT.		10	5	2							
Econ 101	111				67	13	28	108	2	4	+2
102	33				11	10	8	29	1	3	+2
EDUCATION DEPT.		22	20	3							
Educ 201	107				70	24	11	105	2	3	+1
231	79				70	24	9	103	2	3	+1
370	48				70		2	72	2	2	0
ENGLISH DEPT.		19	16	26							
Eng 101 & H	356					0			3	14	+11
102 & H	341				130	46	19	195	6	14	+8
211-4 & H	349										
215	93				7	20	25	52	1	2	+1
216	82				7	20	20	47	1	1	0
217 & H					7	20	12	39	1	2	+1
FRENCH DEPT.		3	5	6							
Fren 101	64				27	0	7	34	2	3	+1
102	59				27	0	6	33	2	3	+1
103	91				58	10	4	72	3	4	+1
104	108				53	10	4	67	3	5	+2
GERMAN DEPT.		3		1							
German 101	79				42	3	7	52	3	4	+1
102	79				42	3	6	51	3	4	+1
103	55				56	4	2	62	3	4	+1
104	63				53	4	2	59	3	4	+1
HISTORY DEPT.		18	7	13							
Hist 121 & H	130				88	25	9	122	2	3	+1
122	153				88	25	16	129	2	3	+1
217	158				75	25	20	120	2	3	+1
218	126				79	25	22	126	2	3	+1

TABLE IV. (cont.)

	AVERAGE ENROLLMENT 1965-8	AVE.NO. MAJORS 1966-8	1968 FRESHMEN MAJOR INTENDED MAJOR	1968 FRESHMEN MAJOR UNKNOWN 1st PREF.	CORRELATIVES TAKEN FOR OTHER MAJORS	MODEL FRESH. MAJORS	MODEL ELECTORS	MODEL TOTAL	SECTIONS NEEDED 1968-9	SECTIONS SAVED
Hum 201 & H	102								1	+4
LATIN DEPT.		0	1							
Latin 101	8				5	1	1	7	1	0
102	9				5	1	3	9	1	0
103	11				13	1	0	14	1	0
104	7				11	1	0	12	1	0
MATHEMATICS DEPT.		12	15	13						
Math 105	37				24		6	30	1	0
108	31				35		5	40	2	0
115	20				15	10	4	34	1	0
198	130				76	30	5	111	4	+1
199	78				47	20	0	67	3	+2
200	57				26	15	2	43	2	+1
MUSIC DEPT.		5	2	4						
Music 101	98				63	10	33	106	2	0
PHILOSOPHY DEPT.		4	1	2						
Phil 133	73				11	8	25	44	1	0
185	43				113	8	20	141	4	-2
PHYSICS DEPT.		3	3	1						
Physics 103	13								0	+1
185	25				35	1	3	39	1	0
186	12				25	1	3	29	1	0
213	30				42	6	0	48	1	0
214	21				37	4	0	41	1	0
POL SCI DEPT.		9	9	5						
Pol Sci 109	177				76	18	19	113	2	+2
110	43				25	15	9	49	1	0
PSYCH DEPT.		9	3	11						
Psych 101	300				80	20	64	164	3	+3

	AVERAGE ENROLLMENT 1965-8	AVE.NO. MAJORS 1966-8	1968 FRESHMEN INTENDED MAJOR	1968 FRESHMEN MAJOR UNKNOWN 1st PREF.	CORRELATIVES TAKEN FOR OTHER MAJORS	MODEL FRESH. MAJORS	MODEL ELECTORS	MODEL TOTAL	SECTIONS NEEDED	SECTIONS 1968-9	SECTIONS SAVED
RELIGION DEPT.		4	3	1							
Rel 100 & 101	98				17	4	23	44	1	2	+1
212	52				15	3	9	27	1	2	+1
214	46				15	3	9	27	1	1	0
223	34				15	3	27	45	1	1	0
228	57				15	3	17	35	1	2	+1
RUSSIAN DEPT.		3		1							
Russ 101	15				17	2	7	26	1	1	0
102	13				17	2	5	24	1	1	0
103	9				18	4	3	25	1	0	0
104	11				18	4	3	25	1	1	0
SLS 400 & H	180								0	10	+10
SOCIOLOGY DEPT.		10	13	7							
Socio 151	181				73	22	34	129	3	6	+3
SPANISH DEPT.		10	7	4							
Span 101	55				19	0	4	23	1	3	+2
102	52				19	0	4	23	1	3	+2
103	55				27	10	2	39	2	3	+1
104	52				25	10	2	37	2	4	+2
SPEECH DEPT.		4	5	2							
Speech 101	72				29	7	18	54	2	4	+2
130	98				59	7	28	94	1	1	0
TOTALS	5973				2636	674	763	4072	117	199	84

TABLE IV. (cont.)

Fine Arts, History, etc.) would be expected to take Art 106. This estimate was computed using the reports of each chairman and the number of "freshman majors" (see d, above) in his department.

In some cases a chairman was quite specific about what courses would be required of all majors in his department. In that case the total number of his "freshmen majors" was predicted to take the course in question as a "correlative"--except in a few cases where it was known from experience that such a course would often be taken after the freshman year. In these cases the attrition rate described above was used to help intuitively estimate the number of students who would in the end take the course. For example, calculus, although required for a biology major, is often put off; and in fact, fear of taking it may be a reason for some of the biology attrition.

In other cases departments merely made recommendations, e.g., two courses from the social sciences. In this case, the students were divided between the various introductory social sciences in a rather intuitive way, but one based on extensive knowledge of courses, patterns, and preferences of Hiram students.

f) The next column was extrapolated (as described in d, above) from the columns about intended majors. That is, it is an estimate of the number of students who would take Art 106 with the intention of majoring in Art. Notice that in departments with two or more introductory courses it was assumed that not all "intended freshman majors" would take both or all of the intro-

ductory courses. This was based on two types of previous experience on the part of the author.

First, is the factor of attrition noted above. Attrition between courses may either be due to the difficult nature of certain sequential courses (e.g., in mathematics) which causes some students to change their intended major and/or to the fact that some students transfer or drop out of college before taking all the courses listed in the model under their intended major.

Second, in certain fields (e.g., foreign languages) many "freshman majors" receive advanced placement and thus skip over the first course(s) in a sequence.

g) The column labeled "electors" is an estimate of the number of students not planning to major in Art nor required to take Art for another major who would take Art 106 as an elective. It is based on the data collected from enrolled Hiram students about their preferences for electives. The students had been instructed not to pick courses in their major department or courses required by their department (correlatives). The estimate in this column took into account three factors. First, freshmen and sophomores were often not sure about the requirements of their major, so adjustments were made by eliminating any choices which later proved to violate the above instructions. Second, only 183 students (about 1/6 of the student body) were questioned. Third, they picked electives for all four years, whereas the model applied to one year. Appropriate extrapolations were made to take these factors into account and arrive at reasonable estimates of the number of electors who might choose each course.

h) The next column gives the sum of the three previous columns and is the best current estimate of the number of students who would register for each course in the table. It should be noted (on page 9) that the total for all courses is 4072 compared to the average of 5973 students who had taken these courses in the last three years. If one adds the anticipated 2550 students expected to take the new curriculum courses to the 4072 total, it can be seen that 6622 student courses have been accounted for in the model. Since the College has grown some over the last three years, it would be expected that the number of courses in the model would be slightly higher than the 5973 average. Several other methods were also used to check its accuracy. For example, certain departments, e.g., mathematics, for which there had been no recent general college graduation requirement, would be expected to have about the same number of students in the model as in the last three years. This was in fact the case.

i) The column labeled "needed" is the number of sections that would seem to be needed to serve the total number of students expected to enroll in the course. It has been assumed that introductory courses will remain at approximately the same size as in the recent past.

j) The next column lists the number of sections that are actually being taught this year (1969-70).

k) The final column shows the difference between the number of sections needed next year under the new curriculum and the number offered this year. It can be seen that the sum of this

column is 84, which means that 84 sections of courses currently used to fulfill graduation requirements can be dropped so that these faculty may participate in the new curriculum. In some cases it may be that department sizes or personnel should be shifted around to provide the best faculty for the new programs. (This has in fact been done, e.g., new people were added in art and philosophy while certain language instructors here for one year were not replaced.)

Actually, it was decided, in part independently of this model, that each department should contribute one course per year to the new curriculum for each full-time faculty member. With the exception of English, which was considerably freed by dropping the required two term English composition requirement, and the personnel changes mentioned above, there is surprising congruence between this "rule of thumb" and the analysis produced by the model.

Now, returning to the questions raised on the first page, we are ready to provide at least some tentative answers.

1. The program will be staffed primarily by deleting sections of courses now used to meet the general graduation requirements. About 10 additional sections will be needed. They will be obtained by raising funds for the equivalent of one and a half faculty members or by further deletions. (Both were in fact achieved partly because, as noted in h, the model slightly overestimated need.)

2. The new curriculum will have little effect on majors or departmental offerings other than the deletion of the above excess

introductory sections. Each department would still be able to offer at least one section of each introductory course each year.

3. Teaching loads will not be changed.

4. The extra costs accrued will be sought from outside sources. (The College was successful in attaining a $90,000 planning and development grant from the National Endowment for the Humanities.)

In revising this paper I would like to add a postscript for persons planning curricular changes. Making a curricular change as dramatic as dropping about 1/5 of all the sections listed in one year's schedule and replacing them with new courses should not be taken lightly. Even many less ambitious changes have been wrecked because when it came right down to it the staff was not available, i.e., their first commitments were elsewhere. Although it has not been without some problems, Hiram has in fact been able to staff the new programs in the manner described above (at least for the first year). The author feels that this is in no small measure because planning and prediction preceded the faculty vote to accept the new programs. That is, they knew quite specifically what was to be expected of them as departments and even to some extent as individuals. This prior knowledge served as a kind of tacit agreement to give up the necessary courses.

Postscript June 1971:

Although there has been difficulty in securing exactly the needed number and optimal distribution of faculty for each of the new programs, we have been successful in adequately staffing the programs in each of the first three years; 1969-70, 1970-71, and 1971-72.

SUMMARY DESCRIPTION AND EVALUATION OF THE HIRAM COLLEGE CURRICULUM[1]

In the fall of 1969, Hiram College launched a new curriculum. All the traditional discipline-oriented graduation requirements were eliminated in favor of several types of interdisciplinary programs and more student electives. The focus of the Hiram curriculum is on the freshman year.

Since Hiram is on the 3-3 plan, students usually take three concentrated courses each quarter. The following chart shows a typical freshman program which includes three types of new curriculum courses and four electives.

Mid September	Fall Quarter	Winter Quarter	Spring Quarter
Institute	Colloquium I	Colloquium II	An Elective
	20th Century	20th Century	20th Century
	An Elective	An Elective	An Elective

During the ten days before the opening of the regular school year, the Freshman Institute provides all 400 freshmen an extended academic orientation to college and an intensive program of study and practice in written and oral communication skills. About one-third of the Hiram faculty members, representing most academic departments, take part, each working with a group of about thirteen students. One unusual feature of the Institute is the use of the film as a means of expression. Besides viewing and discussing several carefully chosen commercial films, each group of thirteen students plans and produces its own 8mm. movie. Both students and faculty agree that the Institute has been very successful in meeting its goals.

When regular classes begin in the fall, each freshman continues his small group learning experience, meeting in a Freshman Colloquium with eleven fellow freshmen and a professor-adviser. Student preferences, based on one-page descriptions of each proposed topic, are used to form the Colloquium groups. Among the sixty-eight Colloquium topics offered this year are "Evolution and Modern Man," "History and Fiction," "Science and Human Involvement," "Modern Music: Noise Pollution or Art," and "Self and Society." Students select two such Colloquia, one in the first quarter and another with a different professor and group in either the second or third quarter.

There is general agreement among students and faculty that Colloquia are interesting, valuable, and effective in meeting the four common goals of: 1) improving communication skills, 2) improving advising, 3) dealing seriously with substantial academic topics, and 4) exposing students to humane, moral, and aesthetic concerns. Freshmen praise the informality of the Colloquia and suggest that there is better student participation in them than in most courses.

The Twentieth Century and Its Roots is a year-long, fifteen credit-hour course for 400 freshmen. It is designed to help students critically examine the major issues

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[1]This is the descriptive part of a paper presented at the March 1971 National Conference on Higher Education sponsored by the American Association for Higher Education. The complete report and/or further information about any aspect of the program can be obtained from Dr. George A. Morgan, Director of Institutional Research, Hiram College, Hiram, Ohio, 44234.

of our society, e.g., the search for meaning, the uses of technology, the individual and the state, planet survival.

Three or four times a week the freshman class meets as a whole for lectures (often by outstanding visiting speakers), films, plays, debates, concerts, etc. Once or twice a week they meet for discussion in small groups, led by upperclassmen or faculty. Students are encouraged to attend the sessions and read widely, but, with the exception of required position papers, they are free to get what they want out of the course because there are no exams and no penalties for lack of attendance.

Student evaluations of the Twentieth Century Course indicate that it has been moderately well received, being rated about the same as the average freshman course had been under the old curriculum. As such it was apparently the least successful and most problematic of the new freshman programs. Even the freshmen themselves agree that they do not respond as well to the freedom and the demands of personal responsibility as had been hoped.

Our emphasis on the holistic, interdisciplinary approach to education is not limited to the freshman programs. We further implement this philosophy by offering a variety of upperclass interdisciplinary courses, by giving some credit for active participation in a wide range of activities outside the usual course structure, and by encouraging students to develop individualized topical or multi-disciplinary major areas of concentration.

We are thoroughly evaluating the curriculum and its effectiveness. As part of this evaluation, we have studied the comparative impact of the curriculum on the general satisfaction, achievement, and attitudes of students. Of course, we are still collecting the data, but the preliminary results are encouraging.

Freshman satisfaction with various aspects of the College is sampled in September and again in May. We have completed results for the last freshman class to enter under the old curriculum (1968-69) and the first class to enter under the new curriculum (1969-70). In September both groups of freshmen gave high and very similar expected satisfaction ratings. During 1968-69 there was a large drop from September expected satisfaction to actual satisfaction in May on almost all the rated aspects of the College. Other evidence indicates that this drop was no greater than the common failure of most colleges to live up to the freshman expectations. However, last year, with the new curriculum, there was significantly less such disillusionment and more satisfaction with almost all aspects of the College.

This finding was supported by results from the ETS College Student Questionnaire, Part II. In May 1970, there was significantly higher freshman satisfaction, than in May 1969, with the Hiram faculty, administration, and other students.

The freshmen under the new curriculum scored significantly higher on the College Board English Achievement Test, relative to their high school scores, than did the 1968-69 group which under the previous curriculum had had the presumed advantage of two terms of freshman English.

Finally, scores on the attitude scales of the College Student Questionnaire indicate that last year's freshmen changed significantly more during their freshman year than did students under the old curriculum. These changes were toward becoming more liberal, socially concerned, and culturally sophisticated.

We feel that, on balance, we have a workable and effective curriculum which meets the needs of contemporary students.